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**CALIFORNIA RED-LEGGED FROG RECOVERY PLAN AVAILABLE
FOR PUBLIC REVIEW**

SACRAMENTO, California- The U.S. Fish and Wildlife Service announced today that a draft recovery plan for the California red-legged frog (*Rana aurora draytonii*) is available for public review and comment through August 10, 2000. The California red-legged frog, a native amphibian believed to have inspired Mark Twain's fabled short story "The Celebrated Jumping Frog of Calaveras County," gained Endangered Species Act protection as a threatened species in May 1996.

The largest native frog in the western United States, the California red-legged frog ranges from 1.5 to 5 inches in length. An adult frog is distinguished by its unique coloring: an olive, brown, gray or reddish back marked by small black flecks and larger dark blotches and a rusty-red hue to its belly and the undersides of its hind legs.

The historic range of the California red-legged frog extended coastally from the vicinity of Point Reyes National Seashore, Marin County, California and inland from the vicinity of Redding, Shasta County, California, south to northwestern Baja California, Mexico. The frog has sustained a 70 percent reduction in its geographic range in California as a result of habitat loss and alteration, overexploitation, and introduction of exotic predators. California red-legged frogs are known to occur in 238 streams or drainages in 23 counties, mostly in the north central coast.

The strategy for recovery of the California red-legged frog will involve protecting existing populations by reducing threats; restoring and creating habitat that will be protected and managed in perpetuity; surveying and monitoring populations and conducting research on the biology and threats of the species; and re-establishing populations of the species within the historic range.

The Service welcomes comments on the draft recovery plan. Comments should be addressed to the Field Supervisor, Sacramento Fish and Wildlife Office, 2800 Cottage Way, Room W-2605, Sacramento CA 95825-1846. Copies of the draft recovery plan are available by contacting Diane Elam, Recovery Coordinator, Sacramento Fish and Wildlife Office, at 916/414-6600 or by writing to the above address.

The U.S. Fish and Wildlife Service is the principal Federal agency responsible for conserving, protecting, and enhancing fish and wildlife and their habitats for the continuing benefit of the American people. The Service manages the 93-million-acre National Wildlife Refuge System comprised of more than 500 national wildlife refuges, thousands of small wetlands, and other special management areas. It also operates 66 national fish hatcheries and 78 ecological services field stations. The agency enforces Federal wildlife laws, administers the Endangered Species Act, manages migratory bird populations, restores nationally significant fisheries, conserves and restores wildlife habitat such as wetlands, and helps foreign governments with their conservation efforts. It also oversees the Federal Aid program that distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to state fish and wildlife agencies.

-FWS-

QUESTIONS AND ANSWERS ABOUT THE Red-legged Frog

California Red-legged Frog, (*Rana aurora draytonii*), is the largest native frog in the western United States, ranging in size from 1 ½ to 5 inches. Adult females have a significantly longer body than males, by approximately one inch.

The belly and hind legs of adult frogs are often red or salmon pink; the back is characterized by small black flecks and larger dark blotches on a background of brown, gray, olive or reddish-brown.

California red-legged frogs have been found from sea level to about 5,000 feet and may be found in a variety of habitats. The frogs breed in aquatic habitats such as streams, ponds, marshes, and stock ponds. During wet weather, frogs may move through upland habitats. Frogs spend considerable time resting and feeding in riparian habitat. They mostly eat invertebrates and feed at night.

Historically, the California red-legged frog was found in 46 counties. Today only 23 counties support known populations of the frog.

The California red-legged frog is threatened by a wide variety of human impacts, including urban encroachment, construction of reservoirs and water diversion, contaminants, agriculture, and livestock grazing. These activities can destroy, degrade and fragment habitat. The introduction of non-native predators also threatens the viability of many of the frog populations.

Amphibians worldwide seem to be trouble. If frogs begin showing signs of distress, it could be only a matter of time before other species are affected, including humans. Amphibians are good "indicators" of significant environmental changes that may go initially undetected by humans. Humans breathe through lungs, which are inside our bodies and thus protected from direct contact with air and water. Amphibians, however, breathe partially (and in some species, completely), through their skin, which is constantly exposed to the environment. Their bodies are much more vulnerable and sensitive to factors such as disease, pollution, toxic chemicals, radiation, and habitat destruction. The worldwide occurrences of amphibian declines and deformities could be an early warning to us of serious ecosystem imbalances.

For a good source for learning more about amphibians and efforts underway to halt their decline, visit the worldwide web at <http://frogweb.gov>

Draft Recovery Plan: The objective of the draft recovery plan is to delist the California red-legged frog. However, tasks carried out for the California red-legged frog will also benefit several other sensitive species including salmonids, western pond turtle, foothill yellow-legged frog, mountain yellow-legged frog, California freshwater shrimp, California tiger

salamander, Tidewater goby, unarmed threespine stickleback, San Francisco garter snake, Arroyo southwestern toad, Alameda whipsnake, Santa Cruz long-toed salamander, tricolored blackbird, Tomales asellid, saltmarsh common yellowthroat, southwestern willow flycatcher, little willow flycatcher, and least Bell's vireo.

In the final rule listing the California red-legged frog as federally threatened, five recovery units were established. However, based on conservation needs, ecology, and distribution, eight recovery units are proposed in the recovery plan. They include: Sierra Nevada foothills; North Coast foothills and western Sacramento River; north San Francisco Bay/North Coast; south and east San Francisco Bay; Central Coast; Diablo Range/Salinas Valley; Northern Transverse Range and Tehachapi Mountains; and Southern Transverse Range and Peninsular ranges.

The revised recovery units are delineated by watershed boundaries. Here is a list of which watersheds are included in the revised recovery units:

Sierra Nevada: The eastern boundary is the 5,000 ft. elevation. Watersheds include: Sacramento Headwaters, McCloud, Lower Pit, Sacramento-Lower Cow-Lower Clear, Upper Cow-Battle, Mill-Big Chico, Upper Butte, North Fork Feather, East Branch North Fork Feather, Middle Fork Feather, Honcut Headwaters, Upper Yuba, Upper Bear, Upper Coon-Upper Auburn, North Fork American, South Fork American, Lower Butte, Lower Feather, Lower Yuba, Lower Bear, Lower American, Upper Kern, South Fork Kern, Upper Poso, Upper Deer-Upper White, Upper Tule, Upper Kaweah, Mill, Upper Dry, Upper King, Tulare-Buena Vista lakes, Middle San Joaquin-Lower Chowchilla, Middle San Joaquin-Lower Merced-Lower Stanislaus, Upper San Joaquin, Upper Chowchilla-Calaveras, Lower Cosumnes-Lower Mokelumne, Lower Calaveras-Mormon Slough, Upper Mokelumne, and Upper Cosumnes.

North Coast Range and Western Sacramento River Valley. Watersheds include: Lower Cottonwood, Sacramento-Lower Thames, Lower Sacramento, Lower Cache, Sacramento-Upper Clear, Cottonwood Headwaters, Upper Elder-Upper Thames, Upper Stony, Sacramento-Stone Corral, Upper Cache, and Upper Putah.

North Coast and North San Francisco Bay. Watersheds include: Tomales-Drakes bays, San Pablo Bay (partial), and Suisun Bay (partial)

South and East San Francisco Bay. Watersheds include: Suisun Bay (partial), San Pablo Bay (partial), San Francisco Coastal South (partial), San Francisco Bay, Coyote, and San Joaquin Delta.

Central Coast. Watersheds include: San Francisco Coastal South (partial), San Lorenzo-Soquel, Central Coastal, and Carmel.

Diablo Range and Salinas Valley. Watersheds include: Panoche-San Luis Reservoir, Pajaro, Upper Gatos, Estrella, Tulare-Buena Vista lakes (partial), Carrizo Plain, Alisal-Elkhorn sloughs, and Salinas.

Northern Transverse Ranges and Tehachapi. Watersheds include: Middle Kern-Upper Tehachapi-Grapevine, Santa Maria, Santa Ynez, Cuyama, San Antonio, Santa Barbara, Ventura, Santa Clara, and Antelope-Fremont valleys (partial).

Southern Transverse and Peninsular Ranges. Watersheds include: Calleguas, Santa Monica Bay, Los Angeles, San Gabriel, Antelope-Fremont valleys (partial), Santa Ana, San Jacinto, Seal Beach, Newport Bay, Aliso-San Onofre, Santa Margarita, San Luis Rey, San Diego, Cottonwood-Tijuana, and Salton Sea (partial).

While the goal of the recovery plan is to protect the longer-term viability of all existing populations within each recovery unit, several areas have been identified as core areas where recovery actions will be focused. In many recovery units, core areas represent areas of high California red-legged frog densities (for example, Pescadero Marsh in San Mateo County, the only known area where more than 350 frogs are found). However, some core areas do not currently support the California red-legged frog—such as most Sierra Nevada watersheds. These unoccupied areas will require varying degrees of rehabilitation with the expectation of future recolonization or reestablishments when habitat suitability has been restored.

Actions needed to recover the California red-legged frog include protecting known populations and reestablishing populations; protecting suitable habitat, corridors, and core areas; developing and implementing management plans for preserved habitat, occupied watersheds, and core areas; developing land use guidelines; gathering biological and ecological data necessary for conservation of the species; monitoring existing populations and conducting surveys for new populations; and establishing an outreach program.

The total estimated cost of the draft recovery plan is \$6.7 million. The date of recovery is anticipated to be around 2025.

Questions and Answers:

Q. What is a recovery plan?

A. The Endangered Species Act mandates the preparation of recovery plans for listed species unless such a plan would not contribute to their conservation. Recovery plans detail the actions necessary to achieve self-sustaining, wild populations of listed species so they will no longer require protection under the Endangered Species Act. A recovery plan is an advisory document. Cooperation from private property owners is voluntary.

Q. Who prepares a recovery plan?

A. Depending on the species, plans are prepared by Fish and Wildlife Service biologists, a panel of recognized experts under the direction of a Fish and Wildlife Service employee, or an appropriate consultant contracted by the Fish and Wildlife Service. Regional directors are responsible for approving recovery plans for listed species occurring in their region.

The Draft Recovery Plan for the California Red-legged frog was prepared by Ina Pisani of the U.S. Fish and Wildlife Service and the California red- legged frog recovery team.

Members of the Technical Team are: Dr. Gary Fellers, Point Reyes National Seashore; Galen Rathbun and Norm Scott, Biological Resources Division, U.S. Geological Survey; Mark Jennings; John Steuber, U.S. Department of Agriculture, Wildlife Services; Amy Lind, U.S. Forest Service; and Grace McLaughlin, U.S. Fish and Wildlife Service.

Comprising the Stakeholder Team are: Terry Strange, County of San Joaquin Mosquito and Vector Control District; Sheila Massey, California Cattlemen's Association; Bruce Blodgett, Farm Bureau Federation; Michael Jani, California Farm Bureau, Santa Cruz; John Orr, Home Builders Association of Superior California; Mark Rentz, California Forestry Association; William Shook, Point Reyes National Seashore; Linda Parker, U.S. Forest Service, Los Padres National Forest; Bradley Valentine, California Department of Forestry, Santa Rosa; Philip Zentner, California Environmental Protection Agency; William Cunningham, Natural Resources Conservation Service; Ed Lorentzen, Bureau of Land Management; Ivette Loreda, U.S. Fish and Wildlife Service, San Luis National Wildlife Refuge Complex; Tamara Sasaki, California Department of Parks and Recreation, Off- Highway Motor Vehicle Recreation Division; Sara Chubb, U.S. Forest Service, Albuquerque, New Mexico.

Q. What are recovery tasks?

A. Recovery tasks are actions needed to reduce or resolve the threats or limiting factors that contributed to the endangered or threatened status of the species. These tasks are designed to achieve recovery objectives.

Q. What is the priority system used for tasks?

Recovery tasks are assigned a priority number associated with one of the three priority levels.

Tasks necessary to prevent extinction are priority 1, tasks necessary to avoid further decline are priority 2, and other tasks necessary to achieve recovery are priority 3.

Q. What is the objective of the Draft Recovery Plan for the California Red-legged frog?

A. The ultimate goal of the recovery plan is to delist the California Red-legged frog.

Q. What recovery actions are recommended in the Draft Recovery Plan for the California Red-legged frog?

A. Considering that habitat loss and fragmentation is a major cause of the species' endangerment, protecting known populations and suitable habitat is a central component of this plan. Other recovery actions include reestablishing populations within their historic range; developing and implementing management plans for preserved habitat, occupied watersheds, and core areas; monitoring existing populations and conducting surveys for new populations. Public outreach is also an important task.

Q. Who is responsible for implementing the recovery plan?

A. Although the U.S. Fish and Wildlife Service has the statutory responsibility for implementing this recovery plan, and only Federal agencies are mandated to take part in the effort, the participation of a variety of groups is essential to successful recovery.

Q. Do recovery programs work?

A. Yes, but recovery is a challenge that takes time. It seeks to halt or reverse declines that in some instances have been many years in the making. On average, even in the face of a substantial increase in the number of species listed over the past decade, the recovery efforts of the Service, other Federal agencies, States, tribal governments and private landowners have managed to hold those species with declining populations trends to an overall average of 35 percent. Of all the species listed between 1968 and 1998, only 7--or less than 1 percent--have been recognized as extinct, and subsequently delisted. The fact that almost 99 percent of listed species have not been lost speaks to the Endangered Species Act success as a mechanism for conservation of species that are at risk of extinction.

Q. How is the public involved in this planning process?

A. Public comments on this draft plan are encouraged and should be sent to the Field Supervisor, Sacramento Fish and Wildlife Office, 2800 Cottage Way, Room W-2605, Sacramento, California 95825-1846. Comments must be received by August 10, 2000. All comments will be reviewed and addressed by the Fish and Wildlife Service in the final recovery plan.

Illustration: Stella Stevens

The California Red-Legged Frog

Rana aurora draytonii

Protected by the Endangered Species Act since May 1996

The California red-legged frog is a threatened species. Threatened species are animals and plants that are likely to become endangered in the foreseeable future. Identifying, protecting, and restoring endangered and threatened species is the primary objective of the U.S. Fish and Wildlife Service's endangered species program.

What is the California red-legged frog?

*The California red-legged frog (*Rana aurora draytonii*) is the largest native frog in the western United States. It is one of two subspecies of the red-legged frog found on the Pacific coast.*

The California red-legged frog once ranged across much of California, including mining country, where it is believed to be the title character of Mark Twain's famed short story, "The Celebrated Jumping Frog of Calaveras County."

History:

The historic range of the California red-legged frog extended coastally from the vicinity of Point Reyes National Seashore, Marin County, and inland from the vicinity of Redding, Shasta County, in California southward to northwestern Baja California, Mexico.

The California red-legged frog was harvested for food in the San Francisco Bay area and the Central Valley during the late 1800s and early 1900s with approximately 80,000 frogs harvested annually. As the frogs become more rare, the market for them declined. Bullfrogs were introduced in California around 1896, to help satisfy the demand for frog legs as the red-legged frog population dwindled. Ironically, the native red-legged frog soon become prey for the much larger bullfrog, a threat to the red-legged frog's existence that continues to today.

At about the same time the frog began its decline, Central Valley wetlands and riparian habitats were being converted to agricultural land. Streams were denuded of riparian vegetation and channelized. These changes

resulted in a loss of over 90 percent of historic wetlands with the majority of that loss occurring before 1939. California red-legged frogs were eliminated from the Valley floor by 1960. Those populations that remained in the Sierra Nevada foothills were separated from other populations and nearly eliminated from this area as a result of reservoir construction, introduction of exotic species, and drought.

In Southern California, urbanization with its resulting infrastructure, including road construction, channeling of streams, and reservoir construction had a devastating impact on red-legged frogs. Of the 80 sites known to have harbored this species historically in Southern California, today only one population can be confirmed—at a nature preserve in western Riverside County, which is managed by The Nature Conservancy.

Habitat:

Red-legged frogs require habitat consisting of both aquatic and riparian components. Adults utilize dense, shrubby or emergent vegetation closely associated with deep-water pools with fringes of cattails and dense stands of overhanging vegetation such as willows.

Adult frogs that have access to permanent water will generally remain active throughout the summer. In cooler areas they may hibernate in burrows or other refuges. Red-legged frog adults may move both up and down stream of their breeding habitat to forage and find refuge.

Range and Current Distribution:

California red-legged frogs have been eliminated from more than 70 percent of their historic habitat. Surveys indicate the frogs are present in about 10 percent of their historic locations.

The California red-legged frog is found primarily in wetlands and streams in coastal drainages of central California. Its historic range extended from Point Reyes National Seashore, coastally, and Redding, California, inland southward to northwestern Baja California. Today they are known to occur in about 238 streams or drainages in 23 counties. Monterey, San Luis Obispo, and Santa Barbara counties support the greatest amount of currently occupied habitat. Only four areas within the entire historic range of the subspecies may currently support more than 350 adults.

Life History:

The California red-legged frog ranges from 1.5 to 5 inches in length. The belly and hind legs of adult frogs are often red or salmon pink; the back is characterized by small black flecks and larger dark blotches on a background of brown, gray, olive or reddish-brown.

California red-legged frogs are relatively prolific breeders, usually laying egg masses during or shortly following large rainfall events in late winter or early spring. Females can lay between 2,000 and 5,000 eggs in a single mass. The eggs are attached to vertical emergent vegetation such as bulrushes or cattails.

It takes between 6 to 14 days for the eggs to hatch and approximately 3.5 to 7 months for the tadpoles to develop into frogs. The highest rates of mortality for this species occur during the tadpole stage; less than 1% of eggs hatched reach adulthood.

Tadpoles and young frogs thrive on invertebrates, which they catch with their mouths. They hunt day and night. This constant activity makes them visible, and, therefore, more vulnerable to predators. More than half of the diet of adult frogs consists of Pacific tree frogs and California mice; the rest is insects. Adults feed and are active largely at night.

Why is the California red-legged frog threatened?

Over the last two decades, scientists have noted a widespread decline of frogs and other amphibian species, the causes of which are not fully understood. The decline of the California red-legged frog is attributed to the spread of exotic predators such as bullfrogs, and the widespread changes that have fragmented, habitat, isolated populations, and degraded streams. Its decline signals a loss of diversity and environmental quality in wetlands and streams that are essential to clean water and to the survival of most fish and wildlife species.

What is being done to prevent extinction of the California red-legged frog?

Listing - The California red-legged frog was federally listed as a threatened species in May 1996.

Recovery Plan - The U.S. Fish and Wildlife Service's draft recovery plan for the California red-legged frog will be released for public review in the Spring of 2000. The strategy for recovery will involve protecting existing populations by reducing threats; restoring and creating habitat that will be protected and managed in perpetuity; surveying and monitoring populations and conducting research on the biology and threats of the species; and re-establishing populations of the species within the historic range.

Critical Habitat - The Fish and Wildlife Service is under court order to propose critical habitat for the California red-legged frog by August 31,

2000.

More questions?

Write or call:

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